

Response to Office Action Dated 03/03/2006  
U.S. Patent Application Serial No. 10/812,856

### REMARKS

Claims 2-4 have been amended substantially to better conform them to U.S.P.T.O. practice. Claim 1 is directed to a nonelected invention, is withdrawn and not amended. Basis for amendment of Claim 2 is found, for example, in paragraphs [0001], [0005], [0008] and Figure 3. Basis for amendment of Claim 3 is found, for example, in paragraphs [0014], [0021] and Figure 1. Basis for amendment of Claim 4 is found, for example, in paragraphs [0001], [0005], [0027] and [0028].

### Election

Applicant affirms the election of the invention of Group II, Claims 2-4, without traverse.

### Claim Rejections 35 U.S.C. § 112

The term "resultant" in Claim 2 has been removed. The phrase "The carbon nanotubes" in line 1 of Claim 4 has been removed. The narrative nature of the claims has been corrected. Claim 1 is withdrawn and has not yet been amended.

### Claim Rejections 35 U.S.C. § 103

Claims 2-4 have been rejected as obvious in view of Smalley et al. (U.S. Patent 6,813,714 B1). Smalley et al. relates to a method of making carbon nanotubes, as shown in Figs. 1 and 3, where tube 12, within which reactions take place, is neither used to seal or protect the nanotubes nor prevent reaction of the bundles.

Applicant has substantially amended Claim 2. The amended claim recites an assembly compressing the nanotube bundles sealed in a quartz sheath that has been axially extended (per Fig. 3c) wherein the sheath protects the bundles resisting their reaction. These are claim limitations as the court stated in In re Boe and Duke, 184 U.S.P.Q. 38, 40 (1974-C.C.P.A.):

"This court has stated that all limitation must be considered and that it is error to ignore specific limitations distinguishing over the references. In re Saether, 181 U.S.P.Q. 36, 39 (1974 C.C.P.A.); In re Glass, 176 U.S.P.Q. 489, 491 (1973 C.C.P.A.)."

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Amended Claim 3 has additional limitations relating to the type data gathered in Fig. 1. Amended Claim 4 is directed to the outside diameter (O.D.) of the quartz sheath being less than about 0.1 mm, recognizing that before drawing and quenching the tube is about 5 mm O.D. (paragraph [0026]).

Smalley et al. does not recognize any advantage of sealing the highly electrically conductive carbon nanotubes in quartz. At the bottom of Column 3 and the top of Column 4, Smalley et al. lists examples of carbon nanotube use. Smalley et al. presents no evidence that resembles the sealed nanotube bundles of this invention.

Smalley et al.'s nanotube growth is based on the vapor transport of graphite vapor mixed with transition metal elements which let the graphite deposit on the metal substrate to form single wall nanotube, whereas the applicant's claimed invention starts with bundles of multi-wall nanotubes. The material is then vacuum-sealed in a quartz tube. When heated, the graphite bundle and quartz are drawn while they are red-hot at a high temperature between 900 and 1300°C, and subsequently quenched; the internal pressure of the quartz tube would give a squeezing pressure on the graphite bundles toward its radial direction.

Claim 2 contains further limitations in terms of tension not seen in Smalley et al. and Claim 3 contains further limitations in that the quartz stretch has an outside diameter less than about 0.1 mm. Both of these claims should be allowable.

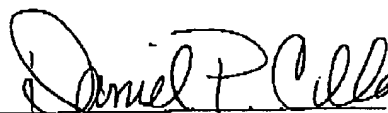
Applicant respectfully submits that Smalley et al. does not teach or make obvious to one skilled in the art at the time of the invention the amended Claims 2-4.

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**Summary**

In review of the preceding amendments to and arguments, applicant respectfully submits that pending Claims 2-4 are in condition for allowance and requests consideration and allowance of these claims. For the examiner's convenience, a copy of In re Boe and Duke, cited previously, is included.

Respectfully submitted,



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### 3. Patentability — Subject matter for patent monopoly — Process, product and apparatus (§51.613)

In *re* Neugebauer, 141 USPQ 205, held that unobviousness of final product was not determinative of unobviousness of method; nevertheless, this is a significant factor to consider in viewing subject matter as a whole.

### 4. Words and phrases (§70.)

Statement in reference that textile oils result in satisfactory lubricating finish for certain polymers "only" when employed with certain metal soaps does not exclude use of other ingredients in finish inasmuch as reference also states that oils cannot be used to lubricate filaments because of harmful effect of such oils, thus compelling an interpretation that oils may be used satisfactorily provided certain metal soaps are included in finish.

### Particular patents—Yarn

Boe and Duke, Release Finish for Yarns Containing Segmented Elastomers, rejection of claims 1 to 9 of application affirmed.

### Appeal from Board of Appeals of the Patent Office

Application for patent of Norman W. Boe and Bascom H. Duke, Serial No. 112,766, filed Feb. 4, 1971; Patent Office Group 162. From decision rejecting claims 1 to 9, applicants appeal. Affirmed.

KELLY O. CONLEY, Pensacola, Fla., for appellants.

JOSEPH F. NAKAMURA (ROBERT D. ECKONDS of counsel) for Commissioner of Patents.

Before MARKEY, Chief Judge, and RICH, BALDWIN, LANE, and MILLER, Associate Judges.

MILLER, Judge.

This is an appeal from the decision of the Patent Office Board of Appeals affirming the examiner's rejection under 35 U.S.C. 103 of claims 1-9—all the claims in application serial No. 112,766, filed February 4, 1971, for "Release Finish for Yarns Containing Segmented Elastomers." We affirm.

### INVENTION

The invention involves a process for reducing tackiness of freshly spun filaments, composed at least partly of a segmented elastomeric polymer, by applying an aqueous,

1 Segmented elastomeric polymers consist of segments of a high-melting crystalline polymer, such as

action, and same meaning. *Procter & Gamble Co. v. Conway*, 57 CCPA 865, 419 F.2d 1332, 164 USPQ 301 (1970).

[3] Appellee has referred to a number of third party registrations which, appellee submits, indicate that appellant does not possess exclusive rights to the representation of a tree, as applied to spices, seasonings, or other food products. Appellee has also introduced 38 third-party registrations, which include the word SPICE, for the purpose of showing that SPICE is commonly used in registered marks applied to spices, seasonings, and other food products. While third-party registrations are to be considered, they are of little help and do not control our determination of whether the marks are so similar that they are likely to cause confusion, mistake, or deception. *Clairol Incorporated v. Roux Laboratories*, supra.

[4] Appellee further argues that the commercial impression created by each mark is significantly different. Thus, it is contended that SPICE ISLANDS connotes a group of islands in Indonesia where the climate is semi-tropical, while SPICE TREE serves to create the impression of a fanciful tree on which various spices are grown. We do not find such an argument persuasive. Suffice to say, we note that it overlooks the fact that appellant uses its mark SPICE ISLANDS in connection with its tree mark.

For the foregoing reasons, the decision of the Trademark Trial and Appeal Board is reversed.

### Court of Customs and Patent Appeals

In *re* Boe and Duke

No. 74-555 Decided Dec. 5, 1974

### PATENTS

#### 1. Patentability — Invention — In general (§51.501)

All limitations must be considered in considering obviousness under 35 U.S.C. 103; it is error to ignore specific limitations distinguishing over the references.

#### 2. Pleading and practice in Patent Office — Rejections (§54.7)

Use of appellants' admission that specific filaments are well known does not constitute a new ground of rejection where filaments are disclosed in reference.

spun filaments to prevent excessive yarn tension during drawing by minimizing friction between the filaments. Appellants have conceded for purposes of this appeal that the aqueous emulsion of Barretl may be considered the same as that of appellants. The tension problem caused by tackiness and the segmented elastomeric polymers are not mentioned in Barretl, but the aqueous emulsion is disclosed to be suitable for a wide variety of synthetic polymeric substances, including polyurethanes, hydrocarbon polymers, and polyesters, which can be used in making segmented elastomeric polymers.

Yuk<sup>3</sup> discloses that the tackiness of segmented elastomeric polymers may be avoided by application of an anhydrous lubricating finish of textile oils and certain finely-divided soaps. Appellants rely heavily upon the following statement from Yuk (emphasis by appellant):

I have discovered that textile oils make a satisfactory finish for elastic filaments from segmented copolymers only when there is dispersed in such oils essentially colorless finely-divided soaps of certain metals (Groups I, II, and III of the periodic table).

### REJECTIONS

Product claims 6-8 were rejected for obviousness under 35 U.S.C. 103 over Barretl view of Yuk or vice versa. The examiner reasoned that since the lubricating finish of Barretl can be used on a wide variety of polymers including polyurethanes, and since the segmented elastomeric polymers of Yuk can be made from polyurethanes, it would be obvious to one of ordinary skill in the art to substitute Yuk's filaments of the segmented elastomeric polymers for the synthetic filaments of Barretl. Conversely, it would be obvious to one of ordinary skill in the art to substitute the lubricating finish of Barretl for the lubricating finish of Yuk.

The examiner's rejection of process claims 1-5 and 9 was simply stated in these words:

Claims 1-5 and 9 are rejected under U.S.C. 103 as obvious and unpatentable over Barretl et al. The claimed method considered to define nothing more than old and obvious method of applying a lubricating finish to synthetic polymeric filaments as evidenced by Barretl et al., sample I, VII, claims 3 and 5. Even if final product were novel, this would not

May 2, 1960, to Barretl, Estes, and Stow, Jr., "Yarn Manufacture and Products Obtainable Thereby."

<sup>3</sup> United States Patent 3,039,895, issued June 1962, on application serial No. 18,264, filed by Barretl.

<sup>2</sup> United States Patent 3,113,369, issued December 10, 1963, on application serial No. 25,902, filed

2. Evidence — Expert testimony (\$96.10)  
Fraud, deception and palming of (\$68.55)

Plaintiff has burden in unfair competition action to prove that defendant's conduct or is likely to cause confusion; he may charge it by (1) proving actual confusion expert testimony as to effect on parties is likely to have on average consumer, or (3) relying on court's fact finding to determine likelihood of deception.

3. Fraud, deception and palming (\$68.55)  
Names — In general (\$68.701)

Absent source confusion, mere imitation of certain successful features in another's product is not unlawful; features imitated be those characteristics of plaintiff's products which distinguish his company from others in the trade; in addition, where marks imitated are of common oric usage, it must be shown that, as to employed, its primary significance in of consuming public is to identify product merely the product.

TRADEMARKS  
4. Title — In general (\$67.861)

Plaintiff gave up any protectable in might have had by sharing his trademark and mark with competitor; name cannot be claimed for exclusive use o two competitors where it is consensu played by both.

UNFAIR COMPETITION  
5. Names — Corporation and c name (\$68.707)

"Pennsylvania Amish Co., Inc." similar to "Pennsylvania Dutch C as to breed confusion.

TRADEMARKS  
6. Evidence — Of confusion (\$

UNFAIR COMPETITION  
Names — Secondary (\$68.725)

Such incidental confusion as mis mail and freight does not create i of secondary meaning in trade na fusion of source.

with which Barrett is concerned is sufficiently analogous to suggest to one skilled in the art that the aqueous emulsion of Barrett would offer a solution to the tension problem caused by tackiness. Cf. In re Pyc, 53 CCPA 877, 355 F.2d 641, 148 USPQ 426 (1966).

Accordingly, we hold the process claims to be obvious over Barrett and admitted prior art.

Product Claims

The main motivation for combining Barrett and Yuk is the similarity of the polymeric filaments treated with the lubricating finishes. Yuk discloses that the high-melting, crystalline segments may be made from a polyurethane, while the low-melting, amorphous segments may be derived from a polyester or a hydrocarbon polymer. In Barrett, a wide variety of polymers may be treated with the lubricating finish, including polyurethanes, hydrocarbon polymers, and polyesters.

[4] Appellants argue that Yuk teaches one skilled in the art away from using the Barrett lubricating finish on segmented elastomeric polymers because of Yuk's use of the word "only" in the statement quoted above ("PRIOR ART") that textile oils result in a satisfactory finish for segmented elastomeric polymers "only" when employed with certain metal soaps. This argument is apparently based upon an exclusionary interpretation of the word "only" in that appellants would have one skilled in the art interpret "only" as excluding the use of other ingredients in the lubricating finish and other lubricating finish compositions for segmented elastomeric polymers. However, we believe that one skilled in the art would have interpreted the word "only" in light of the background of the above-quoted statement wherein Yuk declares that "it has been generally accepted that oils cannot be used to lubricate rubber filaments because of the harmful effect of such oils on physical properties." This compels an interpretation that the textile oils may be used satisfactorily provided certain metal soaps are included in the lubricating finish. Yuk does not teach that more additives could not be used in the lubricating finish, or that other suitable lu-

\* Counsel for appellants emphasized at oral argument that the lubricating finish of Yuk is substantially anhydrous and that the soaps in Yuk are not used as emulsifiers in the lubricating finish. Appellants' specification states that "many of the known emulsifying agents, which are capable of dispersing the wax and textile oil in an aqueous medium to form an emulsion which is stable over extended periods of time and at elevated temperatures, may be employed in the practice of this invention." No argument was made that the soaps of Yuk are unsuitable as emulsifiers in the lubricating finish of